How to carryout a GIS application

Dr. Md. Akhtar Hossain
Professor
Department of Fisheries, University of Rajshahi

Steps involved in a GIS project

- Outline and elaborate the project objectives
- Outline the analysis need
- Outline the data need and their format
- Look the data availability in different organizations
- Identify the data need to capture, collect and collate
- Coding the data, assess it's accuracy
- Capture the data, edit and clean it with proper documentation
- Do the necessary analysis
- Produce output and validate
- Prepare a report

Applications in agriculture/fisheries

- Agro-ecosystem characterization
- Characterization of Fisheries system (capture, culture, coastal/marine)
- Crop suitability (farming of SIS fishes, carps, tilapia, prawn etc.)
- Production planning and decision making
- Natural disaster mitigation planning
- Risk/hazard analysis (drought/flood affected zones)
- Climatic constraints (temperature, rainfall etc.)
- Impact assessment (aquaculture on environment or environment on aquaculture)
- Addressing soil quality (topography, soil organic matter etc.)
- Addressing water quality (pH, alkalinity, hardness, salinity etc.)

GIS map and application

- A map is the simplified model of the real world
- Maps can depict information in various ways depending upon the type of the real world phenomena being observed
- Different maps have different applications

1. **Base map**: street, highways, rivers, lakes, potential areas etc.
2. **Business map**: census/demography, consumer products, financial services, health care, real state etc.
3. **Environmental map**: natural resources, weather, topography, environmental risks etc.
4. **General reference map**: country/world map